

IN THE CLAIMS

Please cancel Claims 1-12 and 50-56 without prejudice, and add new Claims 57-81 as follows:

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1. – 30. (Canceled)

31. (Previously presented) A method of transmitting data across a communication medium to a receiving side comprising:

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receiving at said receiving side a symbol comprising a plurality of bits;

reading the most significant bit and the least significant bit of said symbol; and

determining a symbol type based at least on said reading.

32. (Previously presented) The method of claim 31, wherein the symbol is constructed with its most significant bit identical to its least significant bit.

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33. (Previously presented) The method of claim 32, further comprising generating an error if the most significant bit is different than the least significant bit.

34. (Previously presented) The method of claim 32, wherein the symbol type corresponds to either a first type or a second type.

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35. (Previously presented) The method of claim 34, wherein if a high bit comprises the most significant bit and at the least significant bit of the symbol, the symbol type corresponds to the first type, and if a low bit comprises the most significant bit and at the least significant bit of the symbol, the symbol type corresponds to the second type.

36. (Previously presented) The method of claim 35, further comprising:

reading additional bits comprised within the symbol; and

determining a symbol subtype based at least in part upon the reading of additional bits.

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37. (Previously presented) The method of claim 36, wherein said acts of reading additional bits and determining a symbol subtype are performed only when the symbol type corresponds to the first type.

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38. (Previously presented) The method of claim 36, wherein said determining a symbol subtype is based at least in part upon a value appearing at the bit adjacent to the most significant bit and a value appearing at the bit adjacent to the least significant bit of said symbol.

39. (Previously presented) The method of claim 36, wherein said determining a symbol subtype is based at least in part upon at least five bits, said at least five bits not including the most significant bit, and the least significant bit of the symbol.

5 40. (Previously presented) The method of claim 31, further comprising generating an error if the most significant bit is different than the least significant bit.

41. (Previously presented) An apparatus for use in receiving data transmitted across a communication medium, comprising:

a first module adapted to receive a symbol comprising a plurality of bits;

10 a second module in data communication with said first module and adapted to read the most significant bit and the least significant bit of said symbol; and

a third module adapted to determine a symbol type based on the reading of the second module.

42. (Previously presented) The apparatus of claim 41, wherein the symbol is constructed with its most significant bit identical to its least significant bit.

15 43. (Previously presented) The apparatus of claim 42 further comprising an error generator adapted to generate an error if the most significant bit is different than the least significant bit.

44. (Previously presented) The apparatus of claim 42, wherein the symbol type corresponds to either a first type or a second type.

20 45. (Previously presented) The apparatus of claim 44, wherein if a high bit comprises the most significant bit and at the least significant bit of the symbol, the symbol type corresponds to the first type, and if a low bit comprises the most significant bit and at the least significant bit of the symbol, the symbol type corresponds to the second type.

46. (Previously presented) The apparatus of claim 45, further comprising:

25 a fourth module adapted to read additional bits comprised within the symbol;

a fifth module adapted to determine a symbol subtype based at least in part upon the reading of additional bits by the fourth module.

47. (Previously presented) The apparatus of claim 46, wherein the fourth module and the fifth module are adapted to operate only when the symbol type corresponds to the first type.

30 48. (Previously presented) The apparatus of claim 46, wherein the fifth module is adapted to determine a symbol subtype based at least in part upon the value appearing at the bit adjacent

to the most significant bit and the value appearing at the bit adjacent to the least significant bit of said symbol.

49. (Previously presented) The apparatus of claim 46, wherein the fifth module is adapted to determine a symbol subtype based at least in part upon five bits other than the most significant bit and the least significant bit of the symbol.

50. - 56. (Canceled)

57. (New) A method of reliably transmitting data across a communication medium comprising:

encoding a symbol comprising a plurality of bits, wherein a most significant bit and a least significant bit of said symbol are adapted to indicate a symbol type; and transmitting the symbol across the communication medium; wherein said encoding increases the reliability of said transmitting data.

58. (New) The method of claim 57, wherein the symbol is encoded with said most significant bit identical to said least significant bit.

59. (New) The method of claim 58, wherein the symbol consists of eight bits.

60. (New) The method of claim 58, wherein the symbol type corresponds to either a first type or a second type.

61. (New) The method of claim 60, wherein if said most significant bit and said least significant bit both comprise a high bit, the symbol type corresponds to one of the first and second type, and if the most significant bit and the least significant bit of the symbol both comprise a low bit, the symbol type corresponds to the other of the first and second types.

62. (New) The method of claim 61, wherein said first type comprises a data symbol, and said second type comprises a non-data symbol.

63. (New) The method of claim 61, wherein a bit adjacent to the most significant bit of said symbol and a bit adjacent to the least significant bit of said symbol are adapted to indicate a symbol subtype.

64. (New) The method of claim 63, wherein said symbol subtype comprises one of (i) a control symbol, and (ii) an arbitration request symbol.

65. (New) The method of claim 61, wherein at least five bits of said symbol are adapted to indicate a symbol subtype, said at least five bits not including said most significant bit and said least significant bit.

66. (New) The method of claim 58, wherein said communication medium comprises a bus compliant with a high-speed serialized bus protocol.

67. (New) The method of claim 66, wherein said high-speed serialized bus protocol comprises at least one of the IEEE Std. 1394a and 1394b standards.

5 68. (New) A computerized apparatus for transmitting data across a communication medium, said apparatus comprising:

a first module adapted to encode a symbol comprising a plurality of bits, wherein the first module is adapted to indicate a symbol type by setting or resetting both a most significant bit and a least significant bit of said symbol; and

10 a second module adapted to transmit the encoded symbol across the communication medium.

69. (New) The apparatus of claim 68, wherein the symbol type corresponds to either a first type or a second type;

15 wherein if the most significant bit and the least significant bit of the symbol are both set, the symbol type corresponds to the first type, and if the most significant bit and the least significant bit of the symbol are both reset, the symbol type corresponds to the second type.

70. (New) The apparatus of claim 68, wherein a bit adjacent to the most significant bit of said symbol and a bit adjacent to the least significant bit of said symbol indicate a symbol subtype.

20 71. (New) The apparatus of claim 68, wherein a plurality of bits of said symbol are adapted to indicate a symbol subtype, said plurality of bits not including the most significant bit and the least significant bit of said symbol.

72. (New) The method of claim 71, wherein said communication medium comprises a bus compliant with a high-speed serialized bus protocol.

25 73. (New) The method of claim 72, wherein said high-speed serialized bus protocol comprises at least one of the IEEE Std. 1394a and 1394b standards.

74. (New) A method of operating a computerized device so as to provide protection against errors, comprising:

30 encoding a plurality of symbols from a stream of data, wherein a first bit and a second bit associated with said encoded symbols are each independently useful for determining a symbol type; and

transmitting the symbols including the associated first and second bits across the communication medium;

wherein said first and second bits are disposed so that a single byte error occurring during said transmitting will not adversely affect both of said first and second bits.

5           75. (New) The method of Claim 74, wherein the disposition of said first and second pits comprises a most significant bit position and a least significant bit position, respectively.

76. (New) The method of Claim 75, wherein the stream of data comprises four ten-bit symbols.

10           77. (New) The method of Claim 76, wherein the plurality of symbols comprises five eight-bit symbols.

78. (New) A method of transmitting data, comprising:

creating a second plurality of symbols from a first plurality of symbols, wherein the most significant bit and the least significant bit of each symbol of the first plurality are adapted to indicate a symbol type; and

15           transmitting the second plurality of symbols across the communication medium.

79. (New) The method of Claim 78, wherein a single byte error does not affect both said most and least significant bits, thereby preventing said single byte error from creating a type error condition.

20           80. (New) The method of Claim 78, wherein the first plurality of symbols comprises four ten-bit symbols.

81. (New) The method of Claim 78, wherein the second plurality of symbols comprises five eight-bit symbols.

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